

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: :  
: Attorney Advisor: James Thomson  
CRAVENS, Ronald A. et al. : Office of PCT Legal Administration  
: :  
U.S. Application No. 10/084,592 :  
: :  
Filing Date: February 25, 2002 :  
: :  
For: METHOD AND COMPOSITION FOR DELIVERY OF MEDICANTS TO ANIMALS

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*Via EFS-Web*

**Attention: Mr. James Thomson**  
**Office of PCT Legal Administration**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**SUPPLEMENTAL EVIDENCE**  
**IN SUPPORT OF PETITION TO REVIVE UNDER 37 C.F.R. 1.137(a)**

**or, in the alternative,**

**PETITION TO REVIVE UNDER 37 C.F.R. 1.137(b)**

Responsive to the Examiner's Request, Applicant submits the following in support of its  
Petition to Revive:

**STATEMENT:**

**Unavoidable:** An adequate showing of the cause of the delay, and that the entire delay  
in filing the required reply from the due date for the reply until the filing of a grantable petition  
under 37 CFR 1.137(a) was unavoidable, is enclosed. Applicant submits herewith: (1) The  
engagement letter between Applicant and Mr. Lawrence Husick; (2) The check detail showing  
the amounts paid to Mr. Husick; (3) a timeline showing the events surrounding the delay and

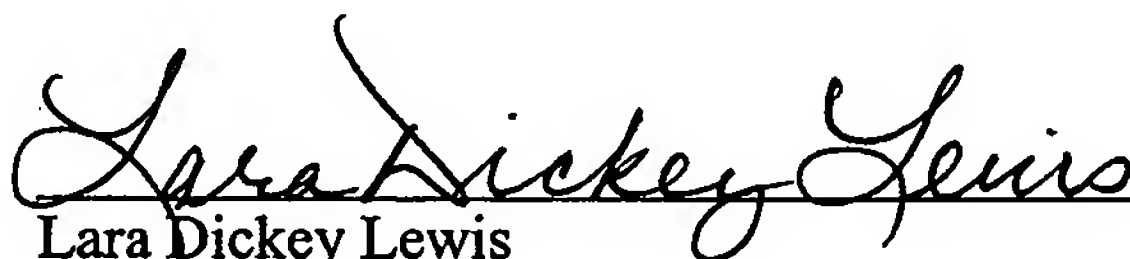
correspondence to and from Mr. Husick; and (4) the Exhibits listed in the timeline which include the complete file history of the application. Of particular note, Applicant points to Exhibit E (Notice of Abandonment for Failure to File Missing Parts dated 11/26/2003) which was mailed to Mr. Husick as attorney of record and the subsequent series of e-mails between Applicant and Mr. Husick (Exhibits F-J) from December 5, 2003 through May 9, 2005 wherein Mr. Husick specifically told Applicant that the application was still pending. Mr. Husick's specific statements regarding the pending status of the application are quoted in the attached timeline for the Examiner's ready reference.

**Unintentional:** The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional.

Respectfully submitted,

Date: \_\_\_\_\_

4-9-08



Lara Dickey Lewis

Reg. No. 48,161

HUSCH BLACKWELL SANDERS LLP

4801 Main Street, Suite 1000

Kansas City, MO 64114

816-983-8000 - telephone

816-983-8080 - fax

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## **Lipton, Weinberger & Husick**

REGISTERED PATENT ATTORNEYS

INTELLECTUAL PROPERTY

AND

TECHNOLOGICAL LAW

P.O. Box 587

Southeastern, Pennsylvania

19399-0587 USA

<http://www.LawHusick.com>

November 30, 2001

ROBERT S. LIPTON  
LAWRENCE A. HUSICK

LAURENCE A. WEINBERGER  
JAMES DAUTREMONT,  
OF COUNSEL

LAWRENCE A. HUSICK:

610-296-8259 TELEPHONE

610-296-5816 FACSIMILE

[Lawrence@LawHusick.com](mailto:Lawrence@LawHusick.com)

Bruce Van Der Kamp  
ASTech International, LLC  
401 Denford Way  
Downingtown, PA 19335

Re: Legal Representation and Retainer Agreement

Dear Bruce:

I am pleased that you have requested that our firm provide your company with intellectual property-related legal services, and thank you for the opportunity to serve you. The Supreme Court and the Bar of the Commonwealth of Pennsylvania require that there be a written representation agreement between attorneys and their clients. Additionally, we feel it is in the best interests of our clients that they be fully informed of our billing practices at the outset of our relationship. The purpose of this letter, therefore, is to set forth the scope of our engagement as legal counsel to ASTech International, LLC, to set forth the financial arrangements regarding the engagement, and to verify our mutual agreement of the foregoing:

### **1. Scope of Engagement; Services Rendered**

Lipton, Weinberger & Husick will perform those legal and related services which you request. Specifically, we have been engaged to advise you with respect to matters related to the acquisition, protection, licensing, and exploitation of your company's intellectual property and technology, but not for any other general legal matters of which you have not informed us in writing. You have specifically asked for our assistance regarding both your business method for animal identification, and for a novel method for administering medicaments to animals. We will keep you informed of the status of your matters, and will use our best reasonable efforts on your behalf. We will strive to complete your work as expeditiously as possible. We do represent many other clients, and there will be times when we will be giving your matters priority over those of others. The converse, however, is also true, and we trust that you will understand

if there is an occasional delay in the completion of a task. We will do our best to provide our services at a fair and reasonable cost to you.

## **2. Fees and Hourly Rates**

Our billing practice is to charge for services based on the criteria set forth in Rule 1.5 of the Pennsylvania Rules of Professional Conduct. These criteria include the nature of the fee agreement, the time and labor required, the novelty or difficulty of a particular question involved, the level of skill requisite to proper performance of the services, the apparent conflicts engendered by the representation, customary fees for the services, the amount involved and the result obtained, special limitations imposed by the client, the nature and length of the professional relationship with the client, and the experience, reputation, and ability of the attorney performing the services. In certain circumstances, we may charge a premium based on the exceptionally favorable or efficient results we obtain. We use the amount of time devoted to a matter at our hourly rates *as one factor (but not the exclusive one)* in determining fees. My current regular rate is \$250 per hour (for all work except litigation.) Rates charged by others in our firm range from \$350 per hour for senior litigation attorneys to \$95 per hour for paralegal staff. Please be assured that we review our bills very carefully before they are finalized and appropriate adjustments are made when necessary.

Our policy regarding travel is to bill for travel time during which we actually perform services for ASTech International, LLC at regular rates, and for travel time during which we do not perform direct services for you, but are otherwise generally unavailable to others at 50% of that rate. Should we travel on your behalf but perform services for another client during our travel time, we will, of course, bill that client, and not ASTech International, LLC. We will ordinarily travel using the lowest available airfare. If, however, a flight is scheduled for more than three hours duration, or if we intend to perform work on your behalf during travel time, we will use Business Class service.

## **3. Disbursements**

The performance of legal services involves costs and expenses which must be paid to third parties such as United States and other government agencies, associate attorneys in foreign countries, consultants, service providers, and foreign governments. We expect that you will either pay directly or reimburse us for such costs. In the normal course of our work these costs could include such items as filing fees, computerized research, messenger services, annuity fees, travel expenses, business meals, stenographers' charges, transcripts, court costs, appraisals, accountants' and experts' fees, long-distance communications charges and other such items which must be paid on your behalf. If such costs may be calculated beforehand and ap-

pear to be substantial, we may ask you to advance us those sums before we expend them, or to reimburse the vendor directly. In cases where you authorize us to advance funds on your behalf from our own accounts (and not from prepaid amounts held in trust), we will add a handling fee of 7% of the amount advanced, to cover our costs involved in the transaction. (We will normally advance funds when the amount is under \$1000.00 without requesting specific authorization, unless you direct otherwise.)

#### **4. Periodic Statements and Payment Terms**

Our practice is to send a periodic statement for services rendered and disbursements incurred on a client's behalf. The detail in the statement will inform you not only of the fees and disbursements incurred but also of the nature and progress of the work performed. These statements are due and payable immediately upon receipt. We reserve the right to charge interest at a rate of 1.5% of the outstanding balance monthly starting thirty (30) days after the issuance of the statement and continuing until fully paid. In the event that our statements are not timely paid, we reserve the right to suspend services until satisfactory payment arrangements are made, or if necessary, terminate such services.

We always do our best to see that our clients are satisfied not only with our services, but also with the reasonableness of the fees and disbursements charged for these services. Therefore, if you have any question about or objection to a statement or the basis for our fees to you, you should raise it promptly and in writing so that we may discuss it. If you object only to a portion of a statement, we ask that you pay the remainder, which will not constitute a waiver of your objections. We ask that you keep us informed of any changes or developments in your matters, and cooperate with our reasonable requests so that we may help you to achieve favorable results.

Your responsibility to pay attorney's fees and costs and expenses is not contingent upon any recovery, income or other event.

#### **5. Retainer**

Our policy is to require that all new clients remit a non-refundable retainer as a minimum charge to cover anticipated legal services and expenses which are necessary for a competent and comprehensive representation of your interests. This minimum charge is predicated upon the undertaking of the responsibility of the above legal representation, precluding us from representing any other party, and does not depend upon success or expenditure of time. If a matter requires a substantial commitment of time, we may require an additional refundable deposit to be applied against our fees as incurred. In the present case, I ask that you forward a



retainer of \$5,000 with the return copy of this letter. Our statements therefore will constitute statements of your account, and will include the retainer upon which we have agreed. We will not credit to you interest earned (if any) on this retainer, which will accrue to the Pennsylvania Interest On Lawyer's Trust Fund Accounts program, and will be used by that program to fund legal services for those who cannot otherwise afford representation. Of course, we are always happy to discuss a revision to our retainer agreement, and it is our intention to review the agreement semi-annually.

## **6. Confidentiality**

In addition to our obligations of confidentiality which flow from the Canons of Legal Ethics, and the Disciplinary Rules of the Commonwealth of Pennsylvania and the United States Patent and Trademark Office, the following terms shall apply to our dealings:

During the course of our engagement, we may have access to or receive information from ASTech International, LLC such as information relating to your business and practices, including, but not limited to data, know-how, technical and non-technical materials, products and/or product samples and specifications, and other such information. All such information, including any materials embodying such information, whether disclosed orally or otherwise, will be considered by us as proprietary and confidential to ASTech International, LLC ("Proprietary Information").

We agree that we will use all reasonable efforts to protect the confidentiality of the Proprietary Information and will not disclose or disseminate the Proprietary Information to any third party without your prior written consent. In no event will we use the Proprietary Information for our own benefit or the benefit of any third party during, or at any time after, the period of our engagement. Our undertakings and obligations under this paragraph shall not apply, however, to any information which we can establish: (i) entered or subsequently enters the public domain without our breach of any obligation owed under this Agreement; (ii) became known to us prior to disclosure of such information by the company; (iii) became known to us from a source other than the company, and other than by the breach of an obligation of confidentiality owed to the company; (iv) is independently developed by us; (v) is disclosed by the company to a third party without restrictions on its disclosure; or (vi) is approved for release by a written authorization of the company.

Upon the termination of this engagement, or at your request, we will deliver all files, documents and other media (and all copies and reproductions of any of the foregoing) in our possession or control which contain or pertain to Proprietary Information, except for those copies

reasonably required to document and substantiate our activities. Furthermore, subject to the above provisions, all Proprietary Information shall remain at all times your sole and exclusive property. You expressly acknowledge that this agreement does not make any partner or employee of Lipton, Weinberger & Husick an employee of ASTech International, LLC or create any obligation on our part to assign to ASTech International, LLC ownership of any inventions, works of authorship, or other proprietary rights now or later developed by us.

## **7. Withdrawal From Representation**

The attorney/client relationship is one of mutual trust and confidence. If you have any questions at all about the provisions of this fee agreement, we invite inquiries. We encourage our clients to inquire about any matter relating to fee agreements or statements that are in any way unclear or appear unsatisfactory. Conversely, any failure on your part to meet your obligation of timely payments or full cooperation with us under this agreement will constitute authorization for us to withdraw from this representation and to reveal this agreement and any other necessary documents to any court or agency if the same should prove necessary to effect withdrawal or payment.

This agreement is also subject to termination by either party upon reasonable notice for any reason. Upon such termination, however, you will remain liable for any unpaid fees and costs, which will become immediately due and payable without set-off or deduction. You specifically authorize us to retain any files, attorney work product, and materials related to this representation until such fees and costs have been paid in full. Any dispute arising out of this Agreement or our representation shall be subject to mandatory arbitration under the Patent Arbitration Rules of the American Arbitration Association. Such arbitration shall be held in Chester County, Pennsylvania, and each party shall bear its own costs and expenses. While we understand that the purpose of this Agreement is to establish an attorney-client relationship between us, we are required by relevant precedent to advise you that you should have the aid of your own counsel in reviewing this Agreement and its arbitration provision prior to signing.

## **8. Future Services**

This agreement will also apply to services rendered for such future matters that we mutually agree Lipton, Weinberger & Husick will handle. If however, such services are substantially different from those to which this agreement applies, either party may request that a new agreement be executed, or that this agreement be reacknowledged.

If this letter correctly sets forth your understanding of the scope of the services to be rendered to ASTech International, LLC, and if the terms of the engagement are satisfactory, please

execute the enclosed copy of this letter and return it to me along with the requested retainer. If the scope of the services described is incorrect or if the terms of the engagement set forth in this letter are not satisfactory to you, please let me know in order that we can discuss either aspect. By executing this agreement, you acknowledge that there is inherent uncertainty concerning the outcome of any legal proceeding, and that we have made no guarantees as to the disposition of any phase of this matter. All representations and expressions relative to the outcome of this matter are only our professional opinions and do not constitute guarantees. We have advised you regarding possible statutory bars which may occur and may prevent you from protecting your rights. We will not be responsible for the performance of any legal service until this signed agreement and the requested retainer are returned to us, and until that time, it is your responsibility to protect yourself against such statutory bars. We look forward to continuing to work with you and thank you once again for the opportunity to serve you.

Very truly yours,

Lipton, Weinberger & Husick

  
Lawrence A. Husick

Read and Acknowledged.  
A check in the amount of \$5,000 is enclosed  
as a retainer payment.

For ASTech International, LLC

\_\_\_\_\_ Date: \_\_\_\_\_

Bruce Van Der Kamp as personal guarantor.

MLH:lah



## Lewis, Lara Dickey

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**From:** Ron Cravens [ron.cravens@oildri.com]  
**Sent:** Tuesday, May 22, 2007 9:33 PM  
**To:** Cashsl00@aol.com; cashman@protez.com; Lewis, Lara Dickey; Denise Henning  
**Cc:** bvk@comcast.net; Bob Mullen; Dr. Ken Odde; Clair Gustafson (home)  
**Subject:** RE: FW: Letter to and from PA Disciplinary Counsel

Thanks Lynnette –

Lara and Denise –

Below are the fees we paid to Lawrence.

Ron Cravens

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**From:** Cashsl00@aol.com [mailto:Cashsl00@aol.com]  
**Sent:** Tuesday, May 22, 2007 8:48 PM  
**To:** cashman@protez.com  
**Cc:** Ron Cravens; bvk@comcast.net  
**Subject:** Re: FW: Letter to and from PA Disciplinary Counsel

Payments to Lawrence Husick were as follows:

1. 12/05/01      \$5,000.00      retainer
2. 06/04/02      \$1,393.50      invoice received

Invoice summary:    \$5,812.50 for 11/01-02/02 patent meetings, research and filings  
                             75.00 for 01/23/02 provisional patent application  
                             475.00 for 02/11/02 patent application  
                             31.00 for patent application express mail  
                             (5,000.00) credit for retainer paid

**S. Lynnette Cashman**

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See what's free at [AOL.com](http://AOL.com).

5/31/2007

9:30 AM  
05/22/06

**ASTech International LLC**  
**Check Detail**  
January 2001 through December 2006

**ASTec**

Original Amount

-5,000.00

5,000.00

TOTAL 5,000.00

-1,393.50

5,812.50

75.00

475.00

31.00

TOTAL 6,393.50

**U.S. Patent Application No. 10/084,592**  
**“Method and Composition for Delivery of Medicants to Animals”**  
**(aka OM or On Mussel Patent)**

<b>Date</b>	<b>Action</b>	<b>Exhibit</b>	<b>Application Status</b>
02/25/2002	Patent Application Filing	A	Pending
03/13/2002	Email: Husick to Cravens et al. re: reporting PTO acknowledgement of receipt of application and according it a filing date of 2/25/2002 and a Serial No. 10/084,592. Mentions need for relevant prior art.	B	Pending
03/19/2002	Email: Cravens to Husick re: asking when Husick will send patent documents (Inventor Oaths/Declarations) for signature.	B	Pending
03/19/2002	Email: Husick to Cravens re: will send documents as soon as receive notice from the PTO to which we must respond (Notice to File Missing Parts). Needs the data on the form to complete declaration that you must sign.	B	Pending
04/18/2002	Notice to File Missing Parts: (1) Basic Filing Fee of \$740; and (2) Inventor Oaths/Declarations	C	Pending
02/03/2003	Email: Cravens to Husick re: “what happened to the OM patent that we filed last Spring - we never had to sign anything and have heard nothing on the progress.”	D	Pending
11/26/2003	Notice of Abandonment for failure to reply to Notice to File Missing Parts	E	Abandoned
12/05/2003	Email: Cravens to Husick re: status of application	F	Abandoned
12/15/2003	Email: Cravens to Husick re: status of application	G	Abandoned
12/15/2003	Email: Husick to Cravens re: received Notice of Abandonment and working to get case back on track	G	Abandoned
12/17/2003	Email: Cravens to Husick re: will Patent Office move up the review because they seemed to have messed things up?	G	Abandoned
12/17/2003	Email: Husick to Cravens re: “Not a chance. Keep dreaming. This is a government agency. They do NOT make mistakes.”	G	Abandoned
04/15/2004	Email: Van Der Kamp to Husick re: status of patent application	H	Abandoned
05/11/2004	Email: Van Der Kamp to Husick re: follow-up on previous inquiry regarding status of patent application	H	Abandoned

**U.S. Patent Application No. 10/084,592**  
**“Method and Composition for Delivery of Medicants to Animals”**  
**(aka OM or On Mussel Patent)**

05/14/2004	Email: Husick to Van Der Kamp re: “Both in queue at PTO, but given that the time to first official action is now sometimes > 20 months, I am not concerned.”	H	Abandoned
09/01/2004	Email: Cravens to Husick re: status of patent application	I	Abandoned
09/07/2004	Email: Husick to Cravens re: “No news is good news.”	I	Abandoned
09/07/2004	Email: Cravens to Husick re: “How can they get away with this kind of delay?”	I	Abandoned
10/25/2004	Email: Cravens to Husick re: status of patent application	I	Abandoned
05/01/2005	Email: Cravens to Husick re: status of patent application. You indicated that you would speak to examiner if nothing appears to be moving	J	Abandoned
05/01/2005	Email: Cravens to Husick re: tried to check status online but got message that application is not available.	J	Abandoned
05/09/2005	Email: Cravens to Husick re: status of application	J	Abandoned
05/09/2005	Email: Husick to Cravens re: “I will check with the PTO, but at this time, your application is just outside the average times now prevalent in the Patent Office . . . so you should not be worried.”	J	Abandoned
07/21/2005	File transfer request from new attorney Lara Dickey Lewis to Husick	K	Abandoned
09/25/2005	Letter from Husick to Lewis denying existence of file	L	Abandoned
11/03/2005	Second letter from Lewis to Husick requesting remainder of client files including OM patent application	M	Abandoned
01/06/2006	Lewis files request for copy of complete file wrapper of patent application and discovers that application has been abandoned since November 11, 2003 for failure to reply to Notice to File Missing Parts dated 4/18/2002. No attempts at revival made.	N	Abandoned
2/8/2006 - 3/23/2006	Multiple voice mail messages left by Lewis for Husick requesting remainder of client files.		Abandoned

**U.S. Patent Application No. 10/084,592**  
**“Method and Composition for Delivery of Medicants to Animals”**  
**(aka OM or On Mussel Patent)**

4/25/2006	Voice mail message left by Lewis for Husick requesting remainder of client files.		Abandoned
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02/25/02

U.S. PTO

02 28 00

A.

PTO 10/084592

02/25/02

Please type a plus sign (+) inside this box ☒

PTO/SB/05 (03-01)  
Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	AST-120
First Inventor	Cravens, Ronald L.
Title	Method and Composition for Delivery...
Express Mail Label No.	EE275443192US

## APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☐ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☒ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 18]  
(preferred arrangement set forth below)
  - Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the invention
  - Brief Summary of the invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure

4. ☐ Drawing(s) (35 U.S.C. 113) [Total Sheets ]

5. Oath or Declaration [Total Pages ]

- a. ☐ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63 (d))  
(for continuation/divisional with Box 18 completed)
- i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s)  
named in the prior application, see 37 CFR  
1.63(d)(2) and 1.33(b).

6. ☐ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO: Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or  
Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)
  - a. ☐ Computer Readable Form (CRF)
  - b. Specification Sequence Listing on:
    - i. ☐ CD-ROM or CD-R (2 copies); or
    - ii. ☐ paper
  - c. ☐ Statements verifying identity of above copies

## ACCOMPANYING APPLICATION PARTS

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement ☐ Power of  
(when there is an assignee) Attorney
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure ☐ Copies of IDS  
Statement (IDS)/PTO-1449 Citations
13. ☐ Preliminary Amendment
14. ☐ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122  
(b)(2)(B)(i). Applicant must attach form PTO/SB/35  
or its equivalent.
17. ☐ Other: .....

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No. \_\_\_\_\_

Prior application information: Examiner \_\_\_\_\_ Group Art Unit \_\_\_\_\_

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

## 19. CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label [REDACTED] or ☐ Correspondence address below

Name	Lawrence A. Husick				
	Lipton, Weinberger & Husick				
Address	P.O. Box 587				
City	Southeastern, PA	State	PA	Zip Code	19399
Country	US	Telephone	610 296-8259	Fax	6102965816

Name (Print/Type)	Lawrence Husick	Registration No. (Attorney/Agent)	31,374
Signature	<i>Lawrence Husick</i>	Date	25-FEB-2002

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

EXHIBIT A



5

**METHOD AND COMPOSITION FOR DELIVERY**  
**OF MEDICANTS TO ANIMALS**

10

**Background of the Invention**

One of the most common diseases in newly received stocker and feedlot cattle is the Bovine Respiratory Disease (BRD) complex. BRD accounts for approximately 75% of morbidity and over 50% of mortality in feedlots (Edwards, A. 1996. Bovine Pract. 30:5). Studies have indicated that BRD manifests its economic losses cumulatively -- through the cost of treatment, the cost of lost production and/or salvage, and the cost of death loss (Perino, L.J. 1992. Compend. Cont. Educ. Pract. Vet. 14 (Suppl.):3) These losses make BRD one of the most costly diseases affecting feedlot cattle. Respiratory tract lesions at slaughter correlate with feedlot and carcass performance (Gardner, B.A. et al. 1999. J. Anim. Sci. 77:3168).

In a recent study of the affects of BRD, heifers treated during the study period had lower average daily gain during the period. Heifers treated for BRD had lower marbling scores resulting in a 37.9% reduction in the percentage of carcasses grading U.S.D.A. Choice, or  
5 above. Heifers never treated produced a net return (carcass basis) that was \$11.48/head more than heifers treated once for BRD, and \$37.34/head more than those treated two or more times. (Stovall, T.C., et al. *Impact of Bovine Respiratory Disease During the Receiving Period on Feedlot Performance and Carcass Traits*, Animal Science Research Report. Oklahoma Agricultural Experiment Station, Oklahoma State University,  
10 Stillwater, Oklahoma, USA, 2000.)

Other diseases are of equal or greater economic importance to the cattle industry, which has historically sought to protect livestock from disease, both for economic and public confidence reasons. Immunization of cattle as a means of preventing disease is a  
15 common and long-standing practice dating back to Jenner and Pasteur. Immunization is the practice wherein pathogenic biological agents (viruses, bacteria, fungus, rickettsia, protozoa, mycoplasma) have been inactivated, attenuated administered with or without immuno-modulating agents (adjuvants) to animals with the intent of stimulating the animal's immune system such that subsequent exposure to the immunizing or natural  
20 agent yields a rapid and specific protective response, thereby avoiding or reducing the severity of disease.

The common means by which commercial vaccines have been administered to animals involves injecting (by use of hypodermic needles) the vaccine material in the skin (intradermal "ID"), in the muscle (intramuscular "IM"), in the subcutaneous tissue ("SC" or "sub-Q")) or applying the product to readily available mucus membranes (in the eye (intraocular "IO"), in the oral cavity (peros "PO"), or in the nasal cavity (intranasal "IN")). Although the poultry industry has used aerosols and water as means of vaccine delivery to large numbers of birds, and the swine industry has used water as a delivery method, there are no aerosol, water or feed vaccines approved for commercial use in cattle, dogs, cats or horses.

In the case of injected products (pharmaceutical or biological), a number of concerns arise. With respect to food safety and consumer concern about meat quality, introduction of material into the animal via injection carries with it the potential of altering the edible product by scaring, staining, infection or adulteration due to components of the product and/or by carrying foreign material into the body as a result of the injection process as well as the potential for needles being left in the animal. The National Cattlemen's Beef Association has identified losses associated with injection site reactions resulting in damage to the animal, meat, hides and undermining consumer confidence in the safety and quality of beef. Additionally, injection requires close physical contact between the animal and the person administering the vaccine. This close physical contact entails risk

of injury to both the animal and the person. There is a potential for accidental injection of workers or non-target animals. Proper disposal of used needles is an ongoing concern.

With respect to application of the vaccine, it is difficult to assure or identify proper deposition of the dose volume into the approved target tissue, particularly under modern management practices where large numbers of animals are rapidly processed. Injection of companion animals (dog, cat, horse) has animal welfare and owner acceptability concerns as well as the potential for infection, pain and tissue damage at the site of administration,

- 10 Administration via mucus membranes has several advantages over injected vaccines. Entry of foreign material into edible tissues is avoided. Some pharmaceutical products (insulin – West Pharmaceuticals) have been shown to perform better when applied to mucus membranes as compared to IM or SC injection. The natural route of exposure to the common respiratory and enteric pathogens is via the oral and or nasal route.
- 15 Stimulation of a mucosally active immune response is better able to prevent or minimize colonization (a prerequisite to infection and disease) by invading pathogens.

Additionally, intranasal administration of vaccines typically stimulates a rapid response and has been shown to be effective in the presence of maternal antibody. There are, however, drawbacks to commercially available cattle vaccines. Products approved for intranasal administration require direct deposition of the vaccine into the nasal cavity

(one or both nares). This is stressful to the animal and requires restraint and close physical contact between the animal and person administering the vaccine. In addition, the animal's immediate response is to resist head restraint and attempt to dispel the injected material from the nasal cavity during or immediately following vaccine administration, back sometimes into the operator's face, with resulting safety and efficacy concerns.

Water and feed have been used experimentally as a means of vaccine delivery to cattle, however, there are concerns relating to proper dose intake of individual animals. There are no commercial cattle vaccines currently approved for use via feed or water.

Mucosal administration of vaccines has been shown to provide a broad based immune response. This involves both a local and systemic response. Traditionally, vaccines used for mucosal administration have been live or attenuated; as killed antigens tended to be minimally effective when given IN or PO. While live or attenuated vaccines provide a rapid response, the duration of immunity has typically been less than with IM administered products. With the advancement in adjuvant technology and vaccine formulation, it is now possible to increase the duration of immunity as well as allow use of inactivated antigens via the mucosal route. Advancement in formulation of pharmaceutical preparations has also led to development efforts for orally and/or nasally administered products (West Pharmaceutical).

Despite the advances in intranasal and other mucosal administrations of vaccination and therapeutic materials, there remain many needs in the development of safe, effective, and efficient methods of administration of such materials to animals. In particular, the

5 following needs remain unmet by the methods of the prior art:

1. The need to avoid use of needles which may (a) cause damage to edible tissues and hides, (b) incite consumer concern over pet and livestock animal welfare, (c) incite consumer and food industry concern over food safety, (d) raise concerns related to worker safety, and (e) give rise to issues concerning disposal of contaminated medical  
10 waste.

2. The need and desire to administer the vaccine to mucosal membranes which is the natural route of infection.

3. The need to avoid (or minimize) close physical contact between the worker and animal in order to reduce the risk of injuries to both.

15 4. The need to have a visual indicator of vaccination in order to increase compliance and proper administration of vaccine, and to reduce inadvertent multiple vaccination.

### **Brief Description of the Invention**

According to the present invention, a vaccine/pharmaceutical-containing composition is  
20 applied to the muzzle of the animal, which will then naturally use its tongue to clean itself. This behavior will cause the animal to deposit a therapeutically effective amount



of the applied composition to the mucosa of the nasal and oral cavities, thus meeting the need for a simple, effective, and efficient vaccination/treatment method of administration.

### Detailed Description of the Invention

5

The present invention comprises a method for immunizing and/or treating cattle or other animals via application of an approved dose of biological vaccines (antigens) or

pharmaceuticals to the muzzle and/or nares area of cattle or other animals via direct application such as a liquid or emulsion paint, spray, paste, mist, roll-on or bio-film. The

10 muzzle of an animal is defined as the facial portion of the respiratory system and rostral portion of the upper and lower jaws collectively, to include the nasal plane, nostrils, medial, lateral, dorsal and ventral borders of the nostrils, the philtrum, superior and inferior lips (*labia oris*) and the angle of the mouth (*angulus oris*). This method of

15 application takes advantage of the normal behavior of cattle and other animals to clean their muzzle with their tongue and thereby deposit the vaccine or pharmaceutical material to the nasal and/or oral mucosa. The method thus minimizes the need for physical contact between the human operator and animal, and eliminates the use of needles. The delivery composition of the present invention may contain any formulation comprised of

20 mucosally active antigens and/or biologically active proteins and/or biologically active chemicals (pharmaceuticals) and/or biologically active carbohydrates with or without

adjuvants, with or without adherent/viscous components, with or without aromatic and palatable components and with or without a visual or non-visible indicator of application.

### Method of Administration

- 5 The composition described above may be applied to the muzzle of the animal in any of a variety of methods according to the present invention. For example, the composition may have a viscosity and concentration appropriate for application by brush or roller. It may be applied by liquid spray, with or without atomization. It may be manually applied as a paste, salve, or film. It may be carried on a carrier web such as a tape, adhesive strip, or patch. In short, any method of contacting the animal's muzzle and transferring to it an effective dose of the composition may be employed.

### Formulation

- 15 The formulation of the compound of the present invention includes, but is not limited to various combinations of the following components for use in all animal species, including cattle, sheep, pigs, cats, dogs, horses, deer, buffalo and other wildlife:

1. Adjuvants or other immune stimulating compounds, such as that described in U.S. Patent No. 6,262,029 "Chemically Modified Saponins and the Use Thereof as Adjuvants", Aluminum hydroxide salts, Aluminum hydroxide gels, Alum,  
20 "Superantigens" which are molecules that stimulate, independent of antigen, those T-cells displaying a particular beta chain variable region (Vbeta) of the T-cell receptor.

These molecules are the most powerful T-cell mitogens known, inducing biological effects at femtomolar concentrations. The best characterized superantigens are the microbial toxins from *Staphylococcus aureus* and *Streptococcus pyogenes*.

(see, [http://www.cbs.umn.edu/bmbb/ohlen\\_lab/superant.html](http://www.cbs.umn.edu/bmbb/ohlen_lab/superant.html))

- 5 Other adjuvants useful for the present invention include natural and synthetic immuno-modulating agents, other saponin and saponin derivatives, mycobacterial cell wall extract – Immnoboost® Bioniche Life Sciences Inc., oil emulsions (water in oil or oil in water) such as Amphigen® from Pfizer, Inc., oils (mineral oil, animal derived oils, plant derived oils such as carbopal), or other proprietary and non-proprietary immuno-modulating agents.

- 10 2. Palatability enhancers, intended to be attractive to the animal's senses of smell and taste, such as plant-derived flavoring agents including but not limited to molasses, sucrose, fructose and anise.

## 15 **Biological Antigens /Vaccines**

- Vaccines are used to prevent and/or treat a multitude of diseases in cattle and other animals. These include diseases of, but are not limited to, the respiratory system, the reproductive system, the urinary system, the gastrointestinal/digestive system, the integument/musculoskeletal system, the hemolymphatic system, the endocrine system,
- 20 the nervous system, and disease of the eye and ear (Current Veterinary Therapy – Food Animal Practice, Howard, 1981, W.B. Saunders Co.). Organisms included are, but are not

limited to, viruses, mycoplasma, chlamydia, protozoa, rickettsia, coccidia, bacteria, fungus (Current Veterinary Therapy – Food Animal Practice, Howard, 1981, W.B. Saunders Co.) and internal and external parasites including, but not limited to, helminths and arthropod parasites as identified in Principle Parasites of Domestic Animals in the United States, Ivens, et. al. 1978, University of Illinois, pp. 30 - 71. All current licensed products for cattle or other animals are administered via injection, via direct deposit in the nasal cavity, via direct deposit in the oral cavity, in water or in feed, topically applied, or by aerosol. The products are composed of from one to many antigens from a multitude of pathogenic and non-pathogenic biological organisms. The specific formulation may be composed of live, attenuated, killed or altered individual biological organisms acting as the immunizing antigen directly or serving as vectors to deliver the antigen of interest. The biologically relevant protective portion of the organism, be they recombinant or natural, can be present as the whole organism, specific and non-specific subunits of the organisms structural and non-structural components including cell wall, cell wall components, endotoxins, exotoxins (e.g. leukotoxin from *M. haemolytica*), culture media supernatant, intracellular proteins and organelles including nuclear (including DNA/cDNA) and non nuclear elements (including RNA/cRNA). All and/or part of the foregoing elements and organisms can be combined with or without immuno-modulating substances (adjuvants) to produce a vaccine designed to prevent and/or treat from one to many diseases following single and/or multiple administrations.

Currently Licensed Veterinary Products may be referenced in the Compendium of Veterinary Products (CVP); Fifth Edition, January 1999; Distributed by North American Compendium, Inc. 942 Military Street, Port Huron, MI 48060

The CVP provides a list of all current Federally (USDA/APHIS, FDA, EPA) approved products for use in cattle or other animals in the United States. This list includes brand names, antigens included, formulations, specific claims, and manufacturer for each product. In addition to those listed, there are non-USDA/APHIS approved or products with USDA/APHIS conditional approvals sold in the United States. These include, but are not limited to, vaccines classified as autogenous vaccines which are compounded for individual customers with organisms originating from the particular customers operation (provided by companies including ImmTech, Grand Laboratories, Texas Vet Labs, American Animal Health, individual practicing veterinarians, Universities and others) conditional licenses are granted for disease such as mycoplasmosis (Texas Vet Labs) where no Federally approved vaccine has been developed. In addition, there are new vaccines, and new claims for existing vaccines under development by many companies that can potentially be administered to cattle and other animals via the mucosal surfaces of the nasal and oral cavities. Outside the United States, similar products, antigens, antigen combinations composed and formulated in a manner similar to those produced and/or sold in the United States are common. All known biological agents can potentially be formulated (as the natural agent, or as a component of the organism via traditional and/or recombinant technology and/or as vectors) into a vaccine such that an immune

response will be engendered in an animal when administered to the nasal and/or oral mucosa. The scope of this invention is intended to encompass all such current or future developed products or technologies, when the administration method involves application to the external structure of a bovine (or other animal's) muzzle and/or nares without the  
5 specific requirement of deposition onto or into the internal nasal and/or oral cavity.

### **Viscosity**

The consistency of the product should be such that it remains in place long enough to allow proper dosage. Mediators of viscosity may be included into the compound formulation to ensure this goal is met.

### **10 Aroma**

Ingredients may be used to enhance the aroma so as to contribute to palatability, or not detract from animal acceptance and natural behavior.

### **Identifier**

In order to provide post-dosing identification of dose animals, a Light visible (e.g.  
15 orange, yellow) or UV or other nonvisible dye may be included in the compound formulation. In this manner, dosed animals may be easily recognized and one may avoid re-dosing them, ensuring proper dosage and saving on materials and labor.

### **Stabilizers**

Appropriate product stabilizers such as to allow for antigen integrity and presentation  
20 may be included in the compound formulation.



**Preservatives**

The compound formulation may contain appropriate preservative ingredients such as antibiotics (e.g. gentamicin, amphotericin B, penicillin, polymyxin B or others), antibacterials or antifungal agents, (e.g. thimerosal, formaldehyde) as deemed appropriate or necessary by APHIS or other relevant regulatory authorities.

**Sustained release substances**

To promote release of active components over a longer time period, ingredients may be included such as inert or biologically active substances so as to extend the time of presentation of the antigen/chemical to the animal's immune system.

**Adhesive Components**

The compound formulation may contain appropriate component(s), which create additional adhesive capability of the product to adhere to the external nasal mucosa and to the internal oral and nasal tracts. These may include a bio-adhesive type of material that extends the time drug/antigen is available on the nasal or oral mucosa.

15

While the invention has been described in its preferred embodiments, it is to be understood that the words which have been used are words of description rather than of limitation and that changes may be made within the purview of the appended claims without departing from the true scope and spirit of the invention in its broader aspects.

20 The inventors further require that the scope accorded their claims be in accordance with the broadest possible construction available under the law as it exists on the date of filing

hereof, and that no narrowing of the scope of the appended claims be allowed due to subsequent changes in the law, as such a narrowing would constitute an ex post facto law, and a taking without due process or just compensation.

14

UNITED STATES PATENT AND TRADEMARK OFFICE  
DOCUMENT CLASSIFICATION BARCODE SHEET



# Claims

5

We claim:

1. A method for treating an animal to achieve a positive effect on the health of the animal comprising applying a biologically-active compound to the muzzle of an animal which subsequently cleans its muzzle with its tongue, thereby distributing the compound into the oral and/or nasal cavities of the animal to contact the nasal and/or oral mucosa.
2. The method of claim 1 wherein said compound contains one or more biologically-active agents selected from the group of vaccines and pharmaceuticals used to prevent and/or treat diseases of the respiratory system, the reproductive system, the urinary system, the gastrointestinal/digestive system, the integument/musculoskeletal system, the hemolymphatic system, the endocrine system, the nervous system, the eye and ear.
3. The method of claim 1 wherein the compound contains one or more biologically-active agents selected from the group of vaccines and pharmaceuticals used to prevent and/or treat diseases caused by viruses, mycoplasma, chlamydia, protozoa, rickettsia, coccidia, bacteria, or fungus, and internal and external parasites.
4. The method of claim 3 wherein the parasites are helminths.
5. The method of claim 3 wherein the parasites are arthropods.

6. The method of claim 1 wherein the compound contains one or more biologically-active agents selected from the group of live, attenuated, killed or altered individual biological organisms and mixtures thereof.
- 5 7. The method of claim 1 wherein the compound contains one or more biologically-active agents selected from the group of whole organisms, specific and non-specific subunits of organisms, structural and non-structural components of organisms comprising cell wall, cell wall components, endotoxins, exotoxins, culture media supernatant, intracellular proteins and organelles including nuclear and non nuclear materials.
- 10 8. The method of claim 1 wherein the compound contains one or more biologically-active agents selected from the group of pharmaceuticals comprising antibacterials, hormones, and organic and inorganic medicants.
9. The method of claim 1 wherein the compound contains one or more immunomodulating substances.
- 15 10. The method of claim 1 wherein the compound contains one or more autogenous vaccines or components thereof.
- 20 11. The method of claim 1 wherein the compound contains one or more compounds selected from the group of aluminum hydroxide salts, aluminum hydroxide gels, alum, saponin and saponin derivatives, mycobacterial cell wall extract, oil, oil emulsions, superantigens and lipopolysaccharides.

12. The method of claim 1 wherein the compound contains one or more palatability enhancers, selected from the group of sugars, carbohydrates, aromatics, molasses, sucrose, or fructose, and plant flavorings.
13. The method of claim 1 wherein the compound optionally contains one or more additional components that provide enhanced viscosity, aroma, visual or machine-aided identification of dosed animals, stability of the biologically-active compound, release modulation or uptake modulation of the biologically-active compound, and adhesive characteristics.
14. A vaccine or pharmaceutical composition suitable for application to the muzzle of an animal, containing a biologically-active material which stimulates an immune response, affects an endocrine function or provides a therapeutic function after distribution to the oral and nasal mucosa of the animal by the licking action of the animal's tongue in cleaning its muzzle.
15. The composition of claim 14 wherein a palatability enhancer is added to the composition.
16. The method of claim 1 wherein the method of applying to the muzzle comprises contacting the animal with a brush or roller, liquid spray, aerosol, spreading a liquid, paste, salve, or film thereon, or application of a carrier web thereto.



**Abstract of the Disclosure**

According to the present invention, a vaccine or pharmaceutical-containing composition is applied to the muzzle area of the animal, which will then naturally use its tongue to clean itself. This behavior will cause the animal to deposit applied composition to the  
5 mucosa of the nasal and oral cavities, thus meeting the need for a simple, effective, and efficient vaccination or treatment method.

**RE: Questions**

From: Ron Cravens <doc2cravens@hotmail.com>  
To: Lawrence A. Husick <Lawrence@LawHusick.com>  
CC: Ron Cravens <doc2cravens@hotmail.com>, Bob Mullen <BobMullen@aol.com>, Bruce Van Der Kamp <BvdKamp@aol.com>, Chris Cashman <Cashman@okc.org>, Clair Gustafson <clgustafson@att.net>, Ken Odde <kenodde@att.net>  
Date: Mar 19 2002 8:44am

Lawrence,

I will check with the partners for their agreement to submit for TM. I feel this is a good umbrella name for the process as it allows several messages to be developed and positioned.

Partners:

Please let me know your thoughts.

Thanks

Ron Cravens MS, DVM  
1502 Van Steuben drive  
West Chester, PA 19380  
610-321-8261

**Original Message**

From: Lawrence A. Husick [mailto:Lawrence@LawHusick.com]  
Sent: Tuesday, March 19, 2002 8:49 AM  
To: Ron Cravens  
Cc: Bruce Van Der Kamp  
Subject: Re: Questions

Ron:

1. I will send the documents as soon as I receive the notice from the PTO to which we must respond. I need the data on that form to complete the declaration that you must sign.

2. I will take a look at NATURE'S WAY as a mark. I suggest that you authorize me to file an "intent to use" registration application to reserve the mark ASAP. As I have told you, filing the application is a \$1,000 item, but early filing will help the cause. As you know, you can buy Cadillac dog food, and drive it home in your Cadillac. Unless there is some animal medication with this name, we're probably OK.

Lawrence

On 3/19/02 6:23 AM, Ron Cravens at doc2cravens@hotmail.com said:

Lawrence,

Hope all is well.

I have two questions:

1. When do you plan to send the OM patent documents for Bruce, Ken and



me to sign?

>2. We have selected a trade name for the OM process "Nature's Way". As  
>you would expect, there are several prior registrations for this name or  
>work combination. I found 57 references on USPTO site. I will attach  
>some of the representative and "live" registrations. My question  
>relates to the ability to use Nature's Way as it relates to our process  
>even though there are other uses out there. The closest thing I read  
>relate to nutritional supplements that made vague claims of improved  
>immunity. I did not see any uses related to animal vaccines.

>Ron Cravens MS, DVM

>1502 Von Steuben drive

>West Chester, PA 19380

>610-701-9201

☒ OM

From: Lawrence A. Husick <Lawrence@LawHusick.com>  
To: Ron Cravens <doc2cravens@hotmail.com>, Ken Odde <hodde@valleyval.net>  
Clair D. Gustafson <clgustafson@att.net>, Clair <clair@valleyval.net>  
Eashmi B. Patel <ebpatel@att.net>, Bruce Van Der Kamp <bvd1000@hotmail.com>, Bob Mullen  
<bmullen@att.net>  
Date: Mar 13, 2002, 12:23pm

Gentlemen:

I am pleased to report that the United States Patent and Trademark Office  
has acknowledged receipt of our application entitled, "METHOD AND  
COMPOSITION FOR DELIVERY OF MEDICANTS TO ANIMALS" and has accorded it a  
filing date of February 25, 2002, and an application serial number of  
10/064592.

I will be in contact shortly to determine if there is relevant prior art  
which we should submit to the examiner in an information disclosure  
statement pursuant to our duty of disclosure under Patent Rule 56.

Lawrence A. Husick  
LIPTON, WEINBERGER & HUSICK  
Intellectual Property and Technology Law  
Lawrence@LawHusick.com  
http://www.LawHusick.com  
P.O. Box 587  
Southeastern, PA 19399-0587  
610/296-8259 Voice 610/296-5816 Fax  
 AOL Netscape M: LawHusick

"It is, in fact, nothing short of a miracle that the modern



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
WASHINGTON, D.C. 20231  
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/084,592	02/25/2002	Ronald L. Cravens	AST-120

CONFIRMATION NO. 5751

FORMALITIES LETTER



\*OC000000007908608\*

Lawrence A. Husick  
Lipton, Weinberger & Husick  
P.O. Box 587  
Southeastern, PA 19399

Date Mailed: 04/18/2002

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION


FILED UNDER 37 CFR 1.53(b)

*Filing Date Granted*

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.  
*Applicant must submit \$ 740 to complete the basic filing fee for a non-small entity. If appropriate, applicant may make a written assertion of entitlement to small entity status and pay the small entity filing fee (37 CFR 1.27).*
- The oath or declaration is missing.  
*A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.*
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(f) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.
- The balance due by applicant is \$ 870.

*A copy of this notice **MUST** be returned with the reply.*

  
Customer Service Center  
Initial Patent Examination Division (703) 308-1202

PART 3 - OFFICE COPY

EXHIBIT C

☒ RE: Patent Filing

From: Ron Cravens <ron.cravens@leawoodks.com>  
To: Lawrence A. Husick <lawrence@lawhusick.com>  
CC: Bruce Van Der Kamp <bvd@csd.net>  
Date: Feb 8, 2003, 7:37pm

Hi Lawrence,

I just received the papers for the ID patent. I have signed and sent them back to you. I was wondering what happened to the OM patent that we filed last Spring -- we never had to sign anything and have heard nothing on the progress.

Thanks for any information you can provide.

Ron Cravens MS, DVM  
14706 Sherwood  
Leawood, KS 66224  
913-681-9023

-----Original Message-----

From: Lawrence A. Husick [mailto:lawrence@lawhusick.com]  
Sent: Wednesday, January 22, 2003 12:52 PM  
To: Bruce Van Der Kamp  
Cc: Ron Cravens; Ken Odde; Clair Gustafson; Chris Cashman; Bob Mullen  
Subject: Re: Patent Filing

Gentlemen:

If you would, please provide below your name, your current home phone number. I would appreciate a response ASAP. If you know the others' numbers, please provide.

Christopher Cashman  
1502 E Grand Oak  
West Chester, PA 19380

Bob Mullen  
1760 Spring House Road  
Chester Springs, PA 19425

Ron Cravens  
14706 Sherwood  
Leawood, KS 66224

Clair Gustafson  
18980 436 Ave  
Bryant, SD 57221

Ken Odde  
11155 SD Hwy 1804  
Pollock, SD 57648

Bruce Van Der Kamp  
17950 E. Dorado Drive  
Centennial, CO 80015

EXHIBIT D





## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/084,592	02/25/2002	Ronald L. Cravens	AST-120

CONFIRMATION NO. 5751

ABANDONMENT/TERMINATION  
LETTER

\*OC000000011358854\*

Lawrence A. Husick  
 Lipton, Weinberger & Husick  
 P.O. Box 587  
 Southeastern, PA 19399

Date Mailed: 11/26/2003

## NOTICE OF ABANDONMENT UNDER 37 CFR 1.53 (f) OR (g)

The above-identified application is abandoned for failure to timely or properly reply to the Notice to File Missing Parts (Notice) mailed on 04/18/2002.

- No reply was received.

A petition to the Commissioner under 37 CFR 1.137 may be filed requesting that the application be revived.

Under 37 CFR 1.137(a), a petition requesting the application be revived on the grounds of **UNAVOIDABLE DELAY** must be filed promptly after the applicant becomes aware of the abandonment and such petition must be accompanied by: (1) an adequate showing of the cause of unavoidable delay; (2) the required reply to the above-identified Notice; (3) the petition fee set forth in 37 CFR 1.17(l); and (4) a terminal disclaimer if required by 37 CFR 1.137(d).

Under 37 CFR 1.137(b), a petition requesting the application be revived on the grounds of **UNINTENTIONAL DELAY** must be filed promptly after applicant becomes aware of the abandonment and such petition must be accompanied by: (1) a statement that the entire delay was unintentional; (2) the required reply to the above-identified Notice; (3) the petition fee set forth in 37 CFR 1.17(m); and (4) a terminal disclaimer if required by 37 CFR 1.137(d).

Any questions concerning petitions to revive should be directed to the "Office of Petitions" at (703) 305-9282. Petitions should be mailed to: Mail Stop Petitions, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.

*A copy of this notice **MUST** be returned with the reply.*

*Z Moqu88*

Customer Service Center  
 Initial Patent Examination Division (703) 308-1202

PART 3 - OFFICE COPY

EXHIBIT E



Hi,

From: Ron Gravers <ron.gravers@sealocal.net>  
To: Lawrence A. Husick <lawrence@lawhusick.com>  
BCC: <easton@omc-sage.com>  
Date: Dec 5, 2003, 4:15pm

image001.jpg - 5.6k - 183x111  
 outlook

Hi Lawrence,

Hope all is well and that you had an enjoyable Thanksgiving.

I was wondering what is happening with our On Mussel patent application. It has been over 18 months and I was thinking we should have heard something by now. I would greatly appreciate an up date or your thoughts on when we should hear something.

Thanks,

Ron Gravers MS, DVM  
14706 Sherwood  
Leawood, KS 66224  
Home 913-681-9023  
Cell 913-516-1616

RE: Checking

From: Lawrence A. Husick <law@husick.com>

To: Ron Cravens <ron.cravens@sbcglobal.net>

Date: Dec 17, 2003, 9:56am

Not a chance. Keep dreaming. This is a government agency. They do NOT make mistakes.

Happy holidays to all

Lawrence

On 12/17/03 10:45 AM, Ron Cravens at [ron.cravens@sbcglobal.net](mailto:ron.cravens@sbcglobal.net) said:

> Thanks Lawrence -- will the Patent Office move up the review since they seem  
> to have messed things up?

>

> Happy Holidays!

>

> Ron Cravens MS, DVM

> 14706 Sherwood

> Leawood, KS 66224

> Home 913-691-6823

> Cell 913-515-1616

>

>

> ----- Original Message -----

> From: Lawrence A. Husick (<mailto:law@husick.com>)

> Sent: Monday, December 15, 2003 2:24 PM

> To: Ron Cravens

> Subject: Re: Checking

>

> Hi Ron:

>

> After you prompted me, I sent in a status request. Last week, without  
> explanation from the PTO, I got back a notice that the application had  
> been abandoned! Needless to say, I am hard at work tracking down the  
> bonehead who made my request into an abandonment (no doubt, a wrong key  
> pressed by a minimum wage worker) and will have the case back on track  
> shortly. (This is nothing to worry about and will delay processing of  
> the case only slightly, if at all.)

>

> I will keep you posted about your government, in action!

>

> Hope you are well.

>

> Happy holidays.

>

> Lawrence

> On 12/15/03 11:26 AM, Ron Cravens at [ron.cravens@sbcglobal.net](mailto:ron.cravens@sbcglobal.net) said:

>

> Hi Lawrence,

>

> I sent a message a couple weeks ago, but have not heard anything back. I

> am

> checking to see if you received the message/questions.

>

>> Happy Holidays!

>> Ron Cravens MS, DVM  
>> 14706 Sherwood  
>> Leawood, KS 66224  
>> Home 913-681-8021  
>> Cell 913-515-1616

>> Lawrence A. Husick  
>> LIPTON, WEINBERGER & HUSICK  
>> Intellectual Property and Technology Law  
>> [law@lwh.com](mailto:law@lwh.com)



**FW: Patent Status**

From: Bruce Van Der Kamp <byk@comcast.net>  
To: Ron Cravens <roncravens@earthlink.net>, Bob Mullen <bobmullen@aol.com>, Bruce Van Der Kamp <byk@comcast.net>, <ashmed01@aol.com>, <ashmed01@aol.com>, <ashmed01@aol.com>, <ashmed01@aol.com>, <ashmed01@aol.com>, <ashmed01@aol.com>, <ashmed01@aol.com>, <ashmed01@aol.com>  
Reply-To: <byk@comcast.net>  
Date: May 14 2004 9:55am

All

Not much insight - perhaps it is NOT possible to get any more from USPTO.

Bruce

-----Original Message-----  
From: Lawrence Husick [mailto:lawrence@lawhusick.com]  
Sent: Friday, May 14, 2004 9:29 AM  
To: byk@comcast.net  
Subject: Re: Patent Status

Both in queue at PTO, but given that the time to first official action is now sometimes >20 months, I am not concerned.

LAH

On May 11, 2004, at 5:58 PM, Bruce Van Der Kamp wrote:

> Lawrence,

> Following up on this inquiry.

> Regards,

> Bruce

-----Original Message-----  
> From: Bruce Van Der Kamp [mailto:byk@comcast.net]  
> Sent: Thursday, April 15, 2004 8:07 AM  
> To: lawrence@lawhusick.com  
> Subject: Patent Status

> Lawrence,

> Can you provide specifics as to the status of our two patents? There  
> is concern that we may be not in the queue since we have heard  
> nothing since filing.

> 1) financial business patent for positively identifying livestock  
> (#60/351120)

> 2) patent for method and composition for delivery of medicants to  
> animals (#222222)

> Thanks,

> Bruce

> Bruce Van Der Kamp

EXHIBIT H

From: Ron Cravens [mailto:roncravens@shcglobal.net]  
Sent: Monday, October 25, 2004 10:44 AM  
To: Lawrence Husick (lawrence@lawhusick.com)  
Cc: 'cashman@protez.com'; 'Clairkim@tctel.com'; 'ken.odde@ndsu.ndak.edu';  
'byk@comcast.net'; 'Bebien01@aol.com'  
Subject: OM patent?

Hi Lawrence,

Just seen some new technology that is being applied intranasal and it reminded me to  
check on our On Mussel patent application -- any news?

## Nasal Powder Influenza Vaccine Under Development

Old sent files on lap top.

From: Bruce Van Der Kamp [mailto:byk@comcast.net]  
Sent: Friday, May 14, 2004 10:56 AM  
To: Ron Cravens; Bob Mullen; Bruce Van Der Kamp; cashmc08@aol.com; cashman@protez.com;  
Clair Gustafson; Ken Odde - Home; Ken.odde@ndsu.ndak.edu  
Subject: FW: Patent Status

ALL

Not much insight - perhaps it is NOT possible to get any more from USPTO.

Bruce

-----Original Message-----

From: Lawrence Husick [mailto:lawrence@lawhusick.com]  
Sent: Friday, May 14, 2004 9:29 AM  
To: byk@comcast.net  
Subject: Re: Patent Status

Both in queue at PTO, but given that the time to first official action  
is now sometimes >20 months, I am not concerned.

LAH

On May 11, 2004, at 5:58 PM, Bruce Van Der Kamp wrote:

> Lawrence,

> Following up on this inquiry.

> Regards,

> Bruce

> -----Original Message-----

From: Bruce Van Der Kamp [mailto:bruce.vdk@comcast.net]  
Sent: Thursday, April 15, 2004 8:07 AM  
To: lawrence@lawhusick.com  
Subject: Patent Status

v

v Lawrence,

v

v Can you provide specifics as to the status of our two patents? There  
v is concern that we may be not in the queue since we have heard  
v nothing since filing.

v

v 1) financial business patent for positively identifying livestock

v ..... (#60/351120)

v 2) patent for method and composition for delivery of medicants to

v animals ..... (#272222)

v

v Thanks,

v

v Bruce

v

v Bruce Van Der Kamp

v ASTech International

v

Lawrence A. Husick

LIPTON, WEINBERGER & HUSICK

Intellectual Property and Technology Law





Web Images Groups News People Local Desktop more

lawrence.husick

Search Desktop

Desktop Preference  
Remove email

Cached messages

Message 7 of 7 in conversation

Older | Newer | View Entire Thread (7) | Reply | Reply to All | Forward | Compose | View in Outlook

☒ RE: On Mussel Patent Update - second request

From: Ron Cravens <ron.cravens@sbcglobal.net>  
To: Lawrence Husick <lawrence@lawhusick.com>  
CC: Bob Mullen <bobm11@aol.com>, Bruce Van Der Kamp <bvkdcomcast.net>  
Chris Cashman <cashman@proxa.com>, Clair Gustafson Home <clarkm@icel.com>  
Ken Code - Home <kencode@valleytel.net>, Ron Cravens SBC  
<ron.cravens@sbcglobal.net>  
Date: May 9 2005 - 11:10am

Thanks Lawrence - we appreciate any information.

Ron Cravens

14706 Sherwood Road

Leawood, KS 66224

Home (913) 681-9023

Cell (913) 515-1616

From: Lawrence Husick [mailto:lawrence@lawhusick.com]  
Sent: Monday, May 09, 2005 9:41 AM  
To: Ron Cravens  
Subject: Re: On Mussel Patent Update - second request

Ron

I will check with the PTO, but at this time, your application is just outside the average times now prevalent in the Patent Office, so you should not be worried.

Lawrence

On May 9, 2005, at 9:34 AM, Ron Cravens wrote:

EXHIBIT J

Hi Lawrence,

We would truly appreciate some sort of update or guidance on the status of both of the patents you submitted for us in the Spring of 2000. Can tell us how or if we can track process through the USPTO?

We have a Board meeting a week from today and need an update.

Thanks for your help,

Ron Cravens

14705 Sherwood Road

Leawood, KS 66224

Home (913) 681-9023

Cell (913) 515-1616

---

From: Ron Cravens [mailto:ron.cravens@sbaglobal.net]

Sent: Sunday, May 01, 2005 9:58 AM

To: Lawrence Husick (HYPERLINK

mailto:lawrence@lawhusick.com|lawrence@lawhusick.com)

Cc: Bob Mullen; Bruce Van Der Kamp; Chris Cashman; Clair Gustafson; Home; Ken

Odde; Home; Ron Cravens SBC

Subject: FW: On Mussel Patent Update

Lawrence,

I rechecked the number and I made an error. It's 10/084592, not 10/084593. However when I look for this number I get the following:

Sorry, the entered Application Number "10/084592" is not available. The number may have been incorrectly typed, or assigned to an application that is not yet available for public inspection.



Ron Cravens

14706 Sherwood Road

Leawood, KS 66224

Home (913) 681-9023

Cell (913) 515-1616

From: Ron Cravens [mailto:ron.cravens@shcalbbal.net]

Sent: Sunday, May 01, 2005 9:48 AM

To: Lawrence Husick (HYPERLINK

"mailto:lawrence@lawhusick.com" lawrence@lawhusick.com)

Subject: On Mussel Patent Update

Hi Lawrence,

AS Tech has a board meeting in two weeks and we need an update on patent status for the OM patent (Method and Composition for delivery of Medicants to Animals, serial # 10/084593, accepted 2/25/02). We last communicated on 10/25/04 and you indicated you would speak to the examiner if nothing appears to be moving.

When I look on the USPTO site under this application number, I do not find reference to AS Tech or any of our members.

<Image001.gif>

What am I doing wrong?

Any update will be greatly appreciated.

Ron Cravens

14706 Sherwood Road

Leawood, KS 66224

Home (913) 681-9023

Cell (913) 515-1616

  
**Sonnenschein**  
SONNENSCHN NATH & ROSENTHAL LLP

Lara Dickey Lewis  
816.460.2516  
ldlewis@sonnenschein.com

7001 2510 0005 2902 5274

July 21, 2005

VIA CERTIFIED MAIL

Lawrence Husick, Esq.  
Lipton Weinberger & Husick  
P.O. Box 587  
Southeastern, PA 19399-0587

Re: ASTech International, LLC Intellectual Property Files

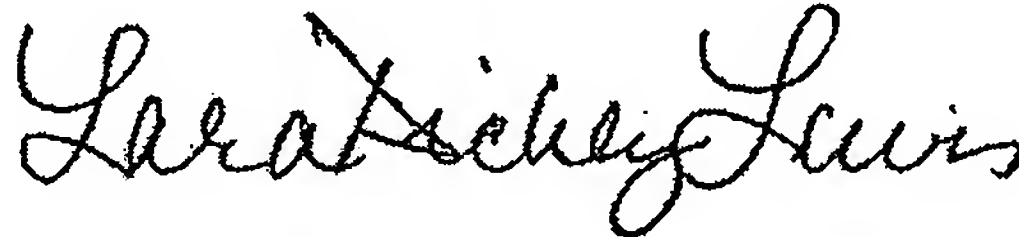
Dear Mr. Husick:

Pursuant to the enclosed authorization from ASTech International, LLC, please forward all files relating to patent, trademark, copyright and any other intellectual property matters that your firm has handled on behalf of ASTech International, LLC and its members to my attention at the address listed above. Your immediate response would be greatly appreciated.

Sincerely,

SONNENSCHN NATH & ROSENTHAL LLP

By:



Lara Dickey Lewis

LDL/cam  
Enclosure

  
4520 Main Street  
Suite 1100  
Kansas City, MO 64111  
816.460.2400  
816.531.7545 fax  
www.sonnenschein.com  
Chicago  
Kansas City  
Los Angeles  
New York  
San Francisco  
Short Hills, N.J.  
St. Louis  
Washington, D.C.  
West Palm Beach

EXHIBIT K

## TRANSFER AUTHORIZATION

The undersigned hereby authorizes the attorneys of Sonnenschein Nath & Rosenthal LLP to request the transfer of all ASTech International, LLC intellectual property files from Lipton Weinberger & Husick to Sonnenschein's Kansas City Office at 4520 Main Street, Suite 100, Kansas City, Missouri 64111. This authorization includes all files relating to patent, trademark, copyright and any other intellectual property matters.

ASTECH INTERNATIONAL, LLC

7/20/05  
Date

By   
Ronald Cravens

**LIPTON, WEINBERGER & HUSICK**  
A PROFESSIONAL CORPORATION

ROBERT S. LIPTON  
LAWRENCE A. HUSICK  
LAURENCE A. WEINBERGER  
ARNOLD WINTER

OF COUNSEL:

ROBERT J. YARBROUGH

ATTORNEYS AT LAW  
201 N. JACKSON STREET  
P.O. BOX 934  
MEDIA, PA 19063

Phone: (610) 566-6000  
Fax : (610) 566-3660

e-mail: [Treb@LiptonLaw.com](mailto:Treb@LiptonLaw.com)  
<http://www.LiptonLaw.com>

PATENT, TRADEMARK,  
COPYRIGHT AND  
RELATED MATTERS

CONCORD PROFESSIONAL  
CENTER  
1010 CONCORD PIKE, SUITE 101  
P.O. BOX 429  
WILMINGTON, DE 19899-0429  
302-425-5600

September 20, 2005

**SENT FEDERAL EXPRESS**  
**AIRBILL NO. 8467 7992 1683**

Lara Dickey Lewis, Esquire  
Blackwell Sanders Peper Martin LLP  
4801 Main Street, Suite 1000  
Kansas City, Missouri 64112

RE: PCT Patent Application  
Title : Method For Positively Identifying  
Livestock and Use Thereof In Legal  
Instruments Relating Thereto  
Int'l. Appln. No. : PCT/US03/02073  
Int'l Filing Date : 23 January 2003  
Our File No. : 5488-2

Dear Ms. Lewis:

Pursuant to Mr. Husick's instructions and our telephone conversation of Friday, September 16, 2005, enclosed please find the above-captioned file. Please be advised that this is the only file we have. Mr. Husick's files indicate that the file for the Provisional Patent Application reflected below was destroyed pursuant to the client's instructions, after it expired.

Provisional Patent Application  
Title : Method For Positively Identifying  
Livestock and Use Thereof In Legal  
Instruments Relating Thereto  
Appln. No. : 60/652,131  
Int'l Filing Date : 23 January 2002  
Our File No. : 5488-1

**EXHIBIT L**

Lara Dickey Lewis, Esquire  
Blackwell Sanders Peper Martin LLP  
September 20, 2005  
Page 2

If you need anything further, please do not hesitate to contact us.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Judith M. King".

Judith M. King  
Administrative Assistant  
To Lawrence H. Husick, Esquire

jmk  
encl:



LAW FIRM

**BLACKWELL SANDERS PEPPER MARTIN**  
LLP

4801 MAIN STREET SUITE 1000 KANSAS CITY, MO 64112  
P.O. BOX 219777 KANSAS CITY, MO 64121-6777  
TEL: (816) 983-8000 FAX: (816) 983-8080  
WEBSITE: www.blackwellsanders.com

Lara Dickey Lewis  
DIRECT: (816) 983-8158

DIRECT FAX: (816) 983-8080  
E-MAIL: llewis@blackwellsanders.com

November 3, 2005

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

Lawrence Husick, Esq.  
Lipton, Weinberger & Husick  
201 North Jackson Street, P.O. Box 934  
Media, Pennsylvania 19063

Re: ASTech International LLC Intellectual Property Files

Dear Mr. Husick:

In addition to the abandoned PCT application your office recently forwarded to me, the members of ASTech International including Mr. Ronald Cravens and Mr. Christopher Cashman have indicated that a U.S. non-provisional patent application having a serial number of 10/084,592 was filed on February 25, 2002. I spoke with your assistant about receiving this file as well and, to date, have not received a response. I also sent you an email regarding this matter on October 12, 2005 and have not received a response from you either.

The PTO has indicated that this application was abandoned on June 19, 2002 for failure to file a response to a Notice of Incomplete Application and that your firm was listed as the correspondence address. I would appreciate receiving the file contents immediately so that I can make a determination as to whether this application can be revived since the inventors clearly believed that it has been pending over the last three years.

I look forward to your immediate response.

Sincerely,

  
Lara Dickey Lewis

**EXHIBIT M**

KC-1340675-1

KANSAS CITY, MISSOURI • ST. LOUIS, MISSOURI • OVERLAND PARK, KANSAS • OMAHA, NEBRASKA  
SPRINGFIELD, MISSOURI • EDWARDSVILLE, ILLINOIS • WASHINGTON, D.C. • LONDON, UNITED KINGDOM

AFFILIATES: LEEDS • MANCHESTER

LAW FIRM

**BLACKWELL SANDERS PEPPER MARTIN**  
LLP

4801 MAIN STREET SUITE 1000 KANSAS CITY, MO 64112  
P.O. BOX 219777 KANSAS CITY, MO 64121-6777  
TEL: (816) 983-8000 FAX: (816) 983-8080  
WEBSITE: www.blackwellsanders.com

Lara Dickey Lewis  
DIRECT: (816) 983-8158

DIRECT FAX: (816) 983-8080  
E-MAIL: llewis@blackwellsanders.com

January 6, 2006

**VIA FACSIMILE (571) 273-3250**

Document Services Division  
USPTO

**Re:** U.S. Patent Appln. Ser. No. 10/084,592  
Filed: 02/25/2002  
Method for Positively Identifying Livestock and Use  
Thereof in Legal Instruments Relating Thereto  
Our File No. 56510-10001

Dear Sir or Madam:

This is to request a non-certified copy of the complete file wrapper of the above-identified patent application. Enclosed is a copy of the Notice of Acceptance of Power of Attorney which shows this firm is entitled to receive a copy said application. Please charge Deposit Account No. 11-0160 and referencing our file number listed above.

If there are any questions concerning this request, please contact the undersigned at the telephone number listed above.

Respectfully submitted,



Lara Dickey Lewis  
Reg. No. 48,161

LDL/jb  
Enclosure

**EXHIBIT N**

KC-1356244-1

KANSAS CITY, MISSOURI • ST. LOUIS, MISSOURI • OVERLAND PARK, KANSAS • OMAHA, NEBRASKA  
SPRINGFIELD, MISSOURI • EDWARDSVILLE, ILLINOIS • WASHINGTON, D.C. • LONDON, UNITED KINGDOM

AFFILIATES: LEBDS • MANCHESTER  
MEMBER OF THE WORLD SERVICES GROUP

74817 U.S. PTO  
26510/01  
10/08/592  
02/25/03

ABANDONED

PATENT NUMBER and  
ISSUE DATE

U.S. UTILITY Patent Application

APPLICATION NUMBER	FILING DATE	CLASS	SUBCLASS	GROUP ART UNIT	EXAMINER
		514		1614	

514-947

(FACE)

NOTICE OF ALLOWANCE MAILED		Assistant Examiner	CLAIMS ALLOWED	
			Total Claims	Print Claim for O.G.
ISSUE FEE		Primary Examiner	DRAWING	
Amount Due	Date Paid		Sheets Drwg.	Figs. Drwg.
<input type="checkbox"/> TERMINAL DISCLAIMER		PREPARED FOR ISSUE	Application Examiner	
WARNING: The information disclosed herein may be restricted. Unauthorized disclosure may be prohibited by the United States Code Title 35, Sections 122, 181 and 368, Possession outside the U.S. Patent & Trademark Office is restricted to authorized employees and contractors only.				

FILED WITH:

☐ DISK (CRF)

☐ CD-ROM

(Attached in pocket on right inside flap)

EXHIBIT O

10084592



10084592

12017 U.S. PTO

10084592



02/25/02 INITIALS

MM

# CONTENTS

	Application	papers.	Date Received (Incl. C. of M.) or Date Mailed		Date Received (Incl. C. of M.) or Date Mailed
1.				31.	
2.	Ltr. Re: P. Dec. 11/18/02		04/18/02	32.	
3.	Ltr. of Abn.		11/25/03	33.	
4.	Re: P. Dec. 11/18/02		10-6-05	34.	
5.	ANSE		10/18/05	35.	
6.				36.	
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[illegible]

(List databases searched. Attach search strategy inside.)

[illegible]

INTERFERENCE SEARCHED			
Class	Sub.	Date	Exmr.



ISSUE SLIP STAPLE AREA (for additional cross-references)

ORIGINAL		CROSS REFERENCE(S)							
CLASS	SUBCLASS	CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)						
INTERNATIONAL CLASSIFICATION									

^ Continued on Issue Slip Inside File Jacket

### INDEX OF CLAIMS

✓ ..... Rejected - (Through numeral) ... Canceled N ..... Non-elected A ..... Appeal  
 = ..... Allowed + ..... Restricted I ..... Interference O ..... Objected

Claim	Date
Final	Original
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Claim	Date
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If more than 150 claims or 9 actions staple additional sheet here

2316764  
 11-26-02  
 04/18/02

<b>CLASSIFICATION NOTES</b>			
<b>Examiner/ Classifier</b>	<b>Class</b>	<b>Date</b>	<b>Initials</b>

POSITION	NAME	ID NO.	DATE
FEE DETERMINATION			
FILE ASSEMBLY			
QUALITY CHECK			
SCANNING	Kona	1	2-9-02
CLASSIFIER	STP	AC	2-10-02
FORMALITY REVIEW	MTD	B6	02-10-02
RESPONSE	T2	994	02-10-02
ALB	Fin	03-08-02	03-08-02



# PATENT APPLICATION FEE DETERMINATION RECORD

Effective October 1, 2001

Application or Docket Number

AST-120

## CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	16	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	16 minus 20= *	
INDEPENDENT CLAIMS	2 minus 3= *	
MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/>		

\* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY  
TYPE ☐

OR  
OTHER THAN  
SMALL ENTITY

RATE	FEE		RATE	FEE
BASIC FEE	370.00	OR	BASIC FEE	740.00
X\$ 9=		OR	X\$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL		OR	TOTAL	

## CLAIMS AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus	**
Independent	*	Minus	***
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

SMALL ENTITY

OR  
OTHER THAN  
SMALL ENTITY

RATE	ADDI- TIONAL FEE		RATE	ADDI- TIONAL FEE
X\$ 9=		OR	X\$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus	**
Independent	*	Minus	***
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

RATE	ADDI- TIONAL FEE		RATE	ADDI- TIONAL FEE
X\$ 9=		OR	X\$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus	**
Independent	*	Minus	***
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

RATE	ADDI- TIONAL FEE		RATE	ADDI- TIONAL FEE
X\$ 9=		OR	X\$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."

\*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

CLAIMS ONLY							SERIAL NO.	FILING DATE
							APPLICANT(S)	
CLAIMS								
	AS FILED		AFTER 1st AMENDMENT		AFTER 2nd AMENDMENT			*
	IND.	DEP.	IND.	DEP.	IND.	DEP.		IND. DEP. IND. DEP. IND. DEP.
1	1						51	
2		1					52	
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5		1					55	
6		1					56	
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49							99	
50							100	
TOTAL IND.	2						TOTAL IND.	
TOTAL DEP.	14						TOTAL DEP.	
TOTAL CLAIMS	16						TOTAL CLAIMS	

\* MAY BE USED FOR ADDITIONAL CLAIMS OR ADMENDMENTS



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov



Bib Data Sheet

CONFIRMATION NO. 5751

<b>SERIAL NUMBER</b> 10/084,592	<b>FILING OR 371(c) DATE</b> 02/25/2002 <b>RULE</b>	<b>CLASS</b> 514	<b>GROUP ART UNIT</b> 1614	<b>ATTORNEY DOCKET NO.</b> AST-120
<b>APPLICANTS</b> Ronald L. Cravens, Residence Not Provided;				
<b>** CONTINUING DATA *****</b>				
<b>** FOREIGN APPLICATIONS *****</b>				
<b>IF REQUIRED, FOREIGN FILING LICENSE GRANTED</b> <b>** 04/18/2002</b>				
Foreign Priority claimed <input type="checkbox"/> yes <input type="checkbox"/> no 35 USC 119 (a-d) conditions <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance Verified and Acknowledged _____ Examiner's Signature _____ Initials _____		<b>STATE OR COUNTRY</b>	<b>SHEETS DRAWING</b>	<b>TOTAL CLAIMS</b> 16  <b>INDEPENDENT CLAIMS</b> 2
<b>ADDRESS</b> 27526				
<b>TITLE</b> Method and composition for delivery of medicants to animals				
<b>FILING FEE RECEIVED</b> 0.00	<b>FEES:</b> Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees ( Filing ) <input type="checkbox"/> 1.17 Fees ( Processing Ext. of time ) <input type="checkbox"/> 1.18 Fees ( Issue ) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit	